

are clustered together in pairs. The anus is a large, transversely oblong opening, placed immediately beneath the posterior margin; from it to the mouth an elevated ridge of the test runs: the single interambulacrum is slightly produced posteriorly where the anus terminates: the tubercles are larger, and placed at greater intervals apart on the base than on the dorsal surface: the marginal fold of the test forms an acute angle, and on the border thereof the tubercles are clustered closer together in greater numbers, with smaller interspaces between them, than in any other part of the skeleton.

Affinities and differences.—This species very much resembles in form and size *C. conoideus*, but it is readily distinguished from it by the following characters: the ambulacral areas are smaller, the poriferous zones are narrower, and the outer and inner pores of each pair are nearly of the same size, whilst the septas between the pores are thicker; the dorsal surface is not so much elevated, the base is concave, the anus is large and transversely oblong, and the mouth possesses very prominent oral lobes.

Locality and stratigraphical range.—This Urchin was collected at Malta, from bed No. 2. The fine specimen before us belongs to the Bristol Institution; we possess one, through the kindness of M. Michelin, from the celebrated Urchin bed of Balistro (Corsica); it is found likewise in the “Molasse du Cap Couronne près Martigues.” (*Michelin.*)

[To be continued.]

XIII.—*Notes on British Zoophytes, with descriptions of new species.* By the Rev. THOMAS HINCKS, B.A.

[With two Plates.]

NEW SPECIES OF SERTULARIA.

THE beautiful form which I am about to describe has hitherto been found, so far as I am aware, only in the Shetland seas. Two specimens in fine condition, and fortunately laden with vesicles, were obtained by Miss Cutler amongst the refuse of Mr. Barlee's dredge. To her great liberality I am indebted for one of these specimens (as for many other interesting zoophytes), and for the opportunity of presenting a figure and description of the species to the readers of the 'Annals.'

Genus SERTULARIA.

S. alata (Hincks).

Pinnate, blackish-brown, highly varnished; *pinnae* winged; cells opposite, adherent below, the upper part suddenly divergent,

wide, compressed, concave above, with an oblong aperture. *Vesicles* small, quadrangular above, with a mucro at each corner on the top, and a raised, circular orifice in the centre.

Polypidom from 3 to 5 inches in height, simply pinnate, of a rich blackish-brown colour, and very highly varnished; *pinnæ* alternate, slender towards the base, often much elongated, winged or keeled along one side; *cells* opposite, adherent for about half their length, and then suddenly divergent,—the upper part wide, compressed, rounded below, the superior surface concave, the sides deeply indented,—aperture oblong, the outer margin everted, the inner sinuated. *Vesicles* small, set along one side of the pinnæ, attenuated towards the base, subquadrangular above,—a mucro (which bends inward) at each corner, and a raised circular orifice in the centre.

The vesicle bears considerable resemblance to that of *S. pinnaster*, as figured by Dr. Johnston.

Sertularia alata is nearly allied to the *S. mutulata*, described by Mr. Busk in the 'Voyage of the Rattlesnake,' and a native of Torres Straits*. Besides other differences, however, the vesicles of the two species are perfectly dissimilar,—that of the *S. mutulata* being aculeate.

Hab. Shetland. (Plate II.)

NEW POLYZOON.

A very minute zoophyte has occurred to me, creeping over the surface of large mussel-shells brought in from the Dogger Bank to the Yorkshire coast, which has hitherto escaped notice. I have not yet had the opportunity of examining it in a living state, but I have little doubt that it is a Polyzoon, and shall assign it a place provisionally as such.

Family *Eucratiadæ*, Johnston.

„ *Scrupariadæ*, Busk.

Genus *HALIA* (Hincks).

Polypidom adherent, creeping, corneous, branched; *cells* decumbent, adnate, irregularly disposed along the fibre, to which they are attached at the base, or by a short stalk.

Species: *Halia pratensis* (Hincks).

Cells elongate, with upturned, terminal, and more or less tubular apertures.

The *polypidom* is a creeping fibre of great delicacy, irregularly branched, corneous and closely adherent; the *cells*, which occur

* I am much indebted to Mr. Busk for his kindness in comparing the Shetland *Sertularia* with the foreign species of the same genus.

sometimes in pairs, one on each side of the fibre, sometimes singly, sometimes in companies, are elongate, attached by a short stalk, adnate, except at the anterior extremity, which bends upward, and terminates in a roundish aperture. They are commonly laid alongside the fibre, and often appressed to it, but occasionally stand out from it.

Hab. Mussel-shells from the Dogger Bank. (Plate III.)

CELLULARIA CUSPIDATA (Busk),—a British species.

Mrs. Gulson has kindly supplied me with a specimen of this *Cellularia*, which she obtained from the refuse of one of the Brixham trawl-boats. It is a well-marked species, allied to *C. Peachii*, and is common in Australia. Collectors in the South should be on the look-out for it. Like the *Caberea Boryi* (Busk), it may prove, when attention is directed to it, to be far from uncommon.

There is a description and figure of *C. cuspidata* in Mr. Busk's 'Catalogue of the Polyzoa in the British Museum.'

CABEREA BORYI.

Of this exquisite species, which is one of the latest additions to our fauna, I have been fortunate enough to procure several small tufts during the past autumn. They were dredged off Budleigh Salterton (Devon), on much the same ground as yielded Miss Cutler's beautiful specimen—the first recorded as British. They were, for the most part, growing in the midst of a mass of *Scrupocellaria scruposa*. The species being small, and bearing a general resemblance to some of the commoner members of its tribe, may readily escape detection, but it seems probable that, at least on the Devonshire coast, it is far from rare.

BEANIA MIRABILIS,—the POLYPE.

The Polype of this species is, I believe, as yet undescribed. It has about twenty long and delicate arms, forming a singularly graceful bell, slightly everted round the rim. When fully extended, it protrudes very far beyond the orifice,—the body at such times only occupying about the upper third of the cell. A long, straight œsophagus leads from the pharynx to the stomach. The flexible portion of the cell, which unrolls as the animal issues (and which has no operculum of *setæ*), is of remarkable length. Amongst the Polyzoa I know of no polype which excels this in beauty, unless it be that of the (so-called) *Flustra hispida*. An examination of its structure justifies Mr. Busk's removal of the genus *Beania* from the family of the *Vesiculariade*.

I have procured the *B. mirabilis* in a living state, parasitic on *Cellularia avicularia*—one of Mr. Bean's original habitats for it—in tide-pools on the Devonshire coast.

LAOMEDEA LACERATA (mihl).

This species (the perfect state of Dr. Johnston's *Campanularia lacerata*), which I first described in the 'Annals' for August 1852, has occurred to me again on the coast of Devon. It has a special liking for *Bowerbankia imbricata*, about the dense tufts of which I have found it in considerable plenty at Exmouth, and I have also dredged it in Slapton Bay, on *Campanularia verticillata*.

CAMPANULARIA INTEGRAL,—the VESICLE.

We have no description or figure, I believe, of the *Vesicle* of this species, though it may perhaps be known to collectors. I have only once met with it,—on specimens of the zoophyte found at Filey on the Yorkshire coast, which spread profusely over one of the red sea-weeds,—a favourite habitat with the various kinds of *Campanularia*. The vesicle of *C. integra* resembles in general character that of its ally the *C. volubilis*, but has its own distinctive peculiarities. It is more truly pedicellate, elongate, spirally twisted; the wrinkles are not so numerous nor so closely set, and are sharply carinated. The vesicle is abruptly attenuated below, and wants altogether the regular ovate form which belongs to that of the *volubilis*.

I am glad to be able to add a drawing of the *C. integra* and its vesicle, from the accurate pencil of Mr. Tuffen West. Plate III.

EXPLANATION OF PLATES II. AND III.

PLATE II.

Sertularia alata, natural size, and portions magnified.

PLATE III.

Halia pratensis, a few cells magnified.

Campanularia integra, with its vesicles, magnified.

XIV.—*On the Marine Vivarium*. By C. S. HARRIS, Esq.

To the Editors of the Annals of Natural History.

GENTLEMEN,

THE accompanying letter was sent to me a short time since by my friend C. S. Harris, Esq., of Budleigh Salterton, Devon, whose experience has been equal to that of either Mr. Warington